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(54) Title: METHODS AND COMPOSITIONS FOR THE MANUFACTURE OF C-3' AND C-4' ANTHRACYCLINE ANTIBIOTICS

(57) Abstract: The present invention discloses new and novel substituted anthracyclines with modified alkyl-aromatic ring substitutions on the C-3' of the sugar moiety or modified or unmodified alkyl-aromatic ring substitutions at the C-4' of the sugar moiety. It also discloses novel methods for the preparation of sugar substrates and methods for the preparation of anthracycline antibiotics. These anthracycline analogs show high cytotoxicity *in vitro* against several tumor cell lines.

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